

*O = ABS + KWIC unless otherwise specified,*

| Ref # | Hits | Search Query                                       | DBs   | Default Operator | Plurals | Time Stamp       |
|-------|------|--|---|------------------|---------|------------------|
| L1    | 1    | "6754822".pn.                                      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2005/02/14 13:22 |
| L2    | 1    | "5841978".pn.                                      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2005/02/14 13:23 |
| L3    | 22   | "internet mark"                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2005/02/14 13:24 |
| S1    | 1    | ("20010027450").PN.                                | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>IBM_TDB | OR               | OFF     | 2004/09/27 08:04 |
| S2    | 1    | S1 and set with (mark watermark)                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2004/09/27 08:05 |
| S3    | 1    | S1 and (mark watermark)                            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2004/09/27 08:58 |
| S4    | 1    | S1 and sort\$3                                     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2004/09/27 09:12 |
| S5    | 1    | S1 and locat\$3                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2004/09/27 09:12 |
| S6    | 1    | EP-814398-A1.did.                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2005/02/14 13:22 |
| S7    | 1    | ((("20010027450").PN.) and \$5mark\$3              | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2004/09/22 10:14 |
| S8    | 1    | ((("20010027450").PN.) and \$5mark                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2004/09/22 10:14 |
| S9    | 1    | ("5572590").PN.                                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>IBM_TDB | OR               | OFF     | 2004/09/22 10:55 |
| S10   | 20   | "5572590".URPN.                                    | USPAT   | OR               | ON      | 2004/09/22 11:17 |
| S11   | 13   | "5572590".URPN. and hash\$3                        | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2004/09/22 10:55 |
| S12   | 1    | ((("20010027450").PN.) and (regist\$9<br>renew\$3) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2004/09/22 13:22 |
| S13   | 1    | ((("20010027450").PN.) and (path\$4)               | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2004/09/22 13:22 |
| S14   | 1    | ((("20010027450").PN.) and (path\$5)               | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR               | ON      | 2004/09/22 13:23 |

|     |     |   |   |    |     |                  |
|-----|-----|---|---|----|-----|------------------|
| S15 | 211 | hash\$3 with ((file adj name) (path adj name))  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 13:30 |
| S16 | 75  | (hash\$3 with ((file adj name) (path adj name))) and @ad<"20000320"   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 13:24 |
| S17 | 52  | ((hash\$3 with ((file adj name) (path adj name))) and @ad<"20000320") and (verif\$9 integrity validat\$3 signature)                                     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 13:30 |
| S18 | 75  | @ad<"20000320" and (hash\$3 with ((file adj name) (path adj name)))   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/14 07:08 |
| S19 | 48  | ((hash\$3 with ((file adj name) (path adj name))) and @ad<"20000320") and (verif\$9 integrity validat\$3 signature) and (verif\$9 integrity validat\$3) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 13:31 |
| S20 | 48  | @ad<"20000320" and (signature\$3 with ((file adj name) (path adj name)))  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:26 |
| S21 | 36  | @ad<"20000320" and (signature\$3 with ((file adj name) (path adj name))) and (verif\$9 integrity validat\$3)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 13:32 |
| S22 | 1   | ((("20010027450").PN.) and (mark watermark))  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 15:01 |
| S23 | 1   | ((("20010027450").PN.) and (mark watermark)) and hash\$3  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 14:43 |
| S24 | 1   | ((("20010027450").PN.) and (mark watermark)) and hash\$3) and (document file)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 14:43 |
| S25 | 1   | ((("20010027450").PN.) and (client server))   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 15:02 |
| S26 | 1   | ((("20010027450").PN.) and (client server)) and hash\$3   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 15:22 |
| S27 | 12  | signature with (path adj name)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 15:33 |
| S28 | 236 | (web adj server) same directory same html same file   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 15:48 |
| S29 | 164 | (hash\$3 signature) adj (tree hierarch\$6)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 15:49 |
| S30 | 38  | @ad<"20000320" and ((hash\$3 signature) adj (tree hierarch\$6)) same (verif\$9 valid\$9 authentic\$5)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 15:54 |
| S31 | 1   | ("4,881,264").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2004/09/22 15:58 |
| S32 | 13  | (hash adj (cumulative\$3 aggregat\$3))  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/22 15:58 |

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|-----|-------|--|---|----|-----|------------------|
| S33 | 7576  | ((hash hashed hashing signature signs signed signing) with (signatures hashes))  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/22 15:59 |
| S34 | 1021  | ((hash hashed hashing signature signs signed signing) adj2 (signatures hashes))  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/22 15:59 |
| S35 | 109   | ((hash ) adj2 (signatures hashes))   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/22 16:06 |
| S36 | 0     | "2001/0027450".PN.   | USPAT   | OR | ON  | 2004/09/22 16:01 |
| S37 | 38    | ((hash ) adj2 (signatures hashes))) and @ad<"20000320"   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 09:00 |
| S38 | 1     | ("5005200").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2004/09/23 09:10 |
| S39 | 5     | (hash adj "of" adj hashes) OR (hashing adj hashes)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 09:20 |
| S40 | 9     | @ad<"20000320" and ((hierarch\$8 nest\$3) adj hash\$3)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 09:15 |
| S41 | 110   | efficien\$2 adj hash\$3  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 09:22 |
| S42 | 56    | (efficien\$2 adj hash\$3) and @ad<"20000320"   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 09:27 |
| S43 | 29082 | @ad<"20000320" and \$2crypt\$9   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 09:28 |
| S44 | 2616  | (@ad<"20000320" and \$2crypt\$9) and hash\$3   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2005/02/10 11:22 |
| S45 | 319   | file adj modification  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 09:28 |
| S46 | 155   | (file adj modification) and @ad<"20000320"   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 09:28 |
| S47 | 29    | ((file adj modification) and @ad<"20000320") and hash\$3   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 10:43 |
| S48 | 416   | @ad<"20000320" and (hash\$3 same integrity)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 10:44 |
| S49 | 15    | (@ad<"20000320" and (hash\$3 same integrity)) and ((verif\$9 validat\$3 authenticat\$3) with (only adj (one single)) ) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 12:36 |
| S50 | 27    | @ad<"20000320" and integrity and (haber stornetta).in.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 12:42 |

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|-----|------|--|---|----|-----|------------------|
| S51 | 1    | (@ad<"20000320" and integrity and (haber stornetta).in.) and hash\$3   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 12:42 |
| S52 | 1    | ("5,136,647").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2004/09/23 12:42 |
| S53 | 7    | @ad<"20000320" and hash\$3 and (haber stornetta).in.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2004/09/23 12:43 |
| S54 | 1    | ("4,309,569").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2004/09/23 12:49 |
| S55 | 6    | sun.as. and hanna.in. and hash\$3  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/23 13:50 |
| S56 | 255  | @ad<"20000320" and hash\$3 and (web adj server) and (files database) and integrity   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/23 13:51 |
| S57 | 59   | @ad<"20000320" and hash\$3 and (web adj server) and (files database) and integrity and watermark\$3  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/23 13:53 |
| S58 | 85   | @ad<"20000320" and hash\$3 and (web adj server) and (files database) and integrity and (watermark\$3 fingerprint\$3)                                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/23 13:54 |
| S59 | 24   | @ad<"20000320" and (web adj server) and (hash\$3 with (files database)) and integrity and (watermark\$3 fingerprint\$3)                              | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/23 13:55 |
| S60 | 13   | (@ad<"20000320" and (web adj server) and (hash\$3 with (files database)) and integrity and (watermark\$3 fingerprint\$3)) not ginter.in.             | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/23 14:02 |
| S61 | 66   | @ad<"20000320" and (visible adj watermark\$3)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/23 14:48 |
| S62 | 1    | @ad<"20000320" and (detect\$3 with chang\$3 with filename)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2004/09/23 15:06 |
| S72 | 356  | @ad<"20000330" and (integrity) and (hash\$3 signature) and (locat\$3 with modif\$7)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:34 |
| S73 | 33   | @ad<"20000330" and (integrity) and (hash\$3 signature) and (locat\$3 with modif\$7) and (track\$3 adj (modif\$7 chang\$3 fals\$10 alter\$6))         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:38 |
| S74 | 1307 | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:40 |
| S75 | 445  | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((modif\$7 chang\$3 fals\$10 alter\$6) with (node locat\$3 between rout\$3)) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:43 |
| S76 | 431  | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((modif\$7 chang\$3 fals\$10 alter\$6) with (locat\$3 between rout\$3))      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:42 |

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| S77 | 417  | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((modif\$7 chang\$3 fals\$10 alter\$6) with (node locat\$3 between route\$1))  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:43 |
| S78 | 413  | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((modif\$7 chang\$3 falsif\$7 alter\$6) with (node locat\$3 between route\$1))   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:44 |
| S79 | 372  | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((modif\$7 chang\$3 falsif\$7 alter\$6) with (node locat\$3 between route\$1)) and (signature hash\$3 sign\$3)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:44 |
| S80 | 263  | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((modif\$7 chang\$3 falsif\$7 alter\$6) with (node locat\$3 between route\$1)) and (signature hash\$3 sign signs signing)                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:46 |
| S81 | 203  | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((modif\$7 chang\$3 falsif\$7 alter\$6) with (node locat\$3 between route\$1)) and (signature hash\$3 sign signs signing) and network                      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:46 |
| S82 | 203  | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((modif\$7 chang\$3 falsif\$7 alter\$6) with (node locat\$3 between route\$1)) and (signature hash\$3 sign signs signing) and network                      | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:47 |
| S84 | 164  | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((modif\$7 chang\$3 falsif\$7 alter\$3 alteration\$1) with (node locat\$3 between route\$1)) and (signature hash\$3 sign signs signing) and network        | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 07:47 |
| S85 | 101  | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((modif\$7 falsif\$7 alter\$3 alteration\$1) with (node locat\$3 between route\$1)) and (signature hash\$3 sign signs signing) and network                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 08:17 |
| S86 | 5    | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((determin\$5 detect\$3) with (modif\$7 falsif\$7 alter\$3 alteration\$1) with (locat\$3 route\$1)) and (signature hash\$3 sign signs signing) and network | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 08:20 |
| S87 | 7    | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((determin\$5 detect\$3) with (modif\$7 falsif\$7 alter\$3 alteration\$1) with (locat\$3 route\$1)) and (signature hash\$3 sign signs signing)             | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 09:08 |
| S88 | 2    | S87 not S86  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 08:24 |
| S89 | 1    | ("5905800").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2005/02/10 08:24 |
| S90 | 0    | @ad<"20000330" and (713/176,179,181.ccls. 705/51,54,56,57,58.ccls.) and ((determin\$5 detect\$3) with where with modification with occur\$4)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | ON  | 2005/02/10 09:09 |
| S91 | 5180 | @ad<"20000320" and (authenticat\$3 verif\$9) with (fail\$3 unsuccessful negative)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB           | OR | OFF | 2005/02/10 11:22 |

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|------|-----|---|---|----|-----|------------------|
| S92  | 213 | @ad<"20000320" and ((authenticat\$3<br>verif\$9) with (fail\$3 unsuccessful<br>negative)) and ((alert\$3 notif\$8) with<br>(sender originating recipient receiver<br>source destination))                     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2005/02/10 11:24 |
| S93  | 13  | @ad<"20000320" and ((authenticat\$3<br>verif\$9) with (fail\$3 unsuccessful<br>negative)) same ((alert\$3 notif\$8) with<br>(sender originating recipient receiver<br>source destination))                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2005/02/10 15:24 |
| S96  | 61  | @ad<"20000320" and ((authenticat\$3<br>verif\$9) with (fail\$3 unsuccessful<br>negative)) and ((alert\$3 notif\$8) with<br>(sender recipient receiver source<br>destination)) and (watermark\$3<br>signature) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2005/02/10 15:28 |
| S97  | 15  | @ad<"20000320" and ((verif\$9) with<br>(fail\$3 unsuccessful negative)) and<br>((alert\$3 notif\$8) with (sender<br>recipient receiver source destination))<br>and (watermark\$3 )                            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2005/02/10 15:40 |
| S98  | 0   | @ad<"20000320" and ((verif\$9) same<br>(fail\$3 unsuccessful negative) same<br>(watermark\$3 )) and ((alert\$3 notif\$8)<br>with (sender recipient receiver source<br>destination))                           | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2005/02/10 15:29 |
| S99  | 1   | "5454037".pn.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | OFF | 2005/02/10 15:40 |
| S100 | 1   | "6263313".pn. and notif\$9  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | ON  | 2005/02/14 08:34 |
| S101 | 70  | @ad<"20000320" and (watermark\$3 same<br>document same (verif\$9 valid\$9))   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | ON  | 2005/02/14 09:06 |
| S102 | 41  | @ad<"20000320" and ((watermark\$3 with<br>document) same (verif\$9 valid\$9))   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | ON  | 2005/02/14 07:09 |
| S103 | 16  | @ad<"20000320" and ((watermark\$3 with<br>document) same (verif\$9 valid\$9)) and<br>signature  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | ON  | 2005/02/14 07:13 |
| S104 | 1   | @ad<"20000320" and ((watermark\$3 with<br>document) same (verif\$9 valid\$9)) and<br>signature and (web adj page)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | ON  | 2005/02/14 07:14 |
| S105 | 3   | @ad<"20000320" and ((watermark\$3 with<br>document) same (verif\$9 valid\$9)) and<br>signature and html   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | ON  | 2005/02/14 07:23 |
| S106 | 2   | @ad<"20000320" and ((watermark\$3 with<br>document) same (verif\$9 valid\$9)) and<br>(intermediary router gateway)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | ON  | 2005/02/14 07:31 |
| S107 | 1   | "6263313".pn. and notif\$9 and<br>watermark\$3  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>IBM_TDB | OR | ON  | 2005/02/14 08:02 |
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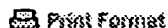
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*Dittmann, J.; Steinmetz, A.; Steinmetz, R.;*

 Multimedia Computing and Systems, 1999. IEEE International Conference on , Volume: 2 , 7-11 June 1999  
 Pages:209 - 213 vol.2

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**2 Relevance of watermarking in medical imaging**
*Coatrieux, G.; Maitre, H.; Sankur, B.; Rolland, Y.; Collorec, R.;*

 Information Technology Applications in Biomedicine, 2000. Proceedings. 2000 EMBS International Conference on , 9-10 Nov. 2000  
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**3 Image authentication and integrity verification via content-based watermarks and a public key cryptosystem**
*Chang-Tsun Li; Der-Chyuan Lou; Tsung-Hsu Chen;*

 Image Processing, 2000. Proceedings. 2000 International Conference on , Vol 3 , 10-13 Sept. 2000  
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**4 Image integrity and correction using parities of error control coding**
*Jaejin Lee; Chee Sun Won;*

Multimedia and Expo, 2000. ICME 2000. 2000 IEEE International Conference on , Volume: 3 , 30 July-2 Aug. 2000

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**5 Pitfalls in public key watermarking**

*Barreto, P.S.L.M.; Hae Yong Kim;*

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**6 Blind detection of malicious alterations on still images using robust watermarks**

*Rey, C.; Dugelay, J.-L.;*

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**7 Computer security research: a British perspective**

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**8 Fault resilient and compression tolerant digital signature for image authentication**

*Der-Chyuan Lou; Jiang-Lung Liu;*

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**9 Watermark design pattern for intellectual property protection in electronic commerce applications**

*Kwok, S.H.; Yang, C.C.; Tam, K.Y.;*

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**10 Robust hash functions for digital watermarking**

*Fridrich, J.; Goljan, M.;*

Information Technology: Coding and Computing, 2000. Proceedings. International Conference on , 27-29 March 2000

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**11 Robust FPGA intellectual property protection through multiple small watermarks**

*Lach, J.; Mangione-Smith, W.H.; Potkonjak, M.;*

Design Automation Conference, 1999. Proceedings. 36th , 21-25 June 1999

Pages:831 - 836

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**12 A public key watermark for image verification and authentication**

*Ping Wah Wong;*

Image Processing, 1998. ICIP 98. Proceedings. 1998 International Conference on , Volume: 1 , 4-7 Oct. 1998

Pages:455 - 459 vol.1

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**13 Robust FPGA Intellectual Property Protection Through Multiple Small Watermarks**

*Lach, J.; Mangione-Smith, W.H.; Potkonjak, M.;*

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John Lach, William H. Mangione-Smith, Miodrag Potkonjak

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**Keywords:** field programmable gate array (FPGA), intellectual property protection, watermarking

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Christian Rauber, Joe Ó Ruanaidh, Thierry Pun

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5

# [Robust IP watermarking methodologies for physical design](#)

Andrew B. Kahng, Stefanus Mantik, Igor L. Markov, Miodrag Potkonjak, Paul Tucker, Huijuan



Wang, Gregory Wolfe

May 1998 **Proceedings of the 35th annual conference on Design automation - Volume 00**

Full text available:  pdf(425.94 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)  
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Increasingly popular reuse-based design paradigms create a pressing need for authorship enforcement techniques that protect the intellectual property rights of designers. We develop the first intellectual property protection protocols for embedding design watermarks at the physical design level. We demonstrate that these protocols are transparent with respect to existing industrial tools and design flows, and that they can embed watermarks into real-world industrial designs ...

**Keywords:** intellectual property test, system-on-chip test, testing embedded core

## 6 [How watermarking adds value to digital content](#)

John M. Acken



July 1998 **Communications of the ACM**, Volume 41 Issue 7

Full text available:  pdf(273.94 KB) Additional Information: [full citation](#), [references](#), [index terms](#), [review](#)

## 7 [Watermarking techniques for intellectual property protection](#)

A. B. Kahng, J. Lach, W. H. Mangione-Smith, S. Mantik, I. L. Markov, M. Potkonjak, P. Tucker, H. Wang, G. Wolfe

May 1998 **Proceedings of the 35th annual conference on Design automation - Volume 00**

Full text available:  pdf(243.93 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)  
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Digital system designs are the product of valuable effort and know-how. Their embodiments, from software and HDL program down to device-level netlist and mask data, represent carefully guarded intellectual property (IP). Hence, design methodologies based on IP reuse require new mechanisms to protect the rights of IP producers and owners. This paper establishes principles of watermarking-based IP protection, where a watermark is a mechanism for identificatio ...

**Keywords:** intellectual property test, system-on-chip test, testing embedded core

## 8 [Robust FPGA Intellectual Property Protection Through Multiple Small Watermarks](#)

John Lach, William H. Mangione-Smith, Miodrag Potkonjak

June 1999 **Proceedings of the 36th Annual Conference on Design Automation (DAC'99) - Volume 00**

Full text available:  [Publisher Site](#) Additional Information: [full citation](#), [abstract](#)

A number of researchers have proposed using digital marks to provide ownership identification for intellectual property. Many of these techniques share three specific weaknesses: complexity of copy detection, vulnerability to mark removal after revelation for ownership verification, and mark integrity issues due to partial mark removal. This paper presents a method for watermarking field programmable gate array (FPGA) intellectual property (IP) that achieves robustness by responding to these thr ...

**Keywords:** Field programmable gate array (FPGA), intellectual property protection,

watermarking

9 A digital watermarking system for multimedia copyright protection 

Jian Zhao, Eckhard Koch

February 1997 **Proceedings of the fourth ACM international conference on Multimedia**

Full text available:  pdf(184.20 KB) Additional Information: [full citation](#), [index terms](#)

**Keywords:** copyright protection, digital watermarking, security

10 Content based watermarking of images 

Mohan S. Kankanhalli, K. R. Ramakrishnan, Rajmohan

September 1998 **Proceedings of the sixth ACM international conference on Multimedia**

Full text available:  pdf(864.71 KB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

11 Strategic directions in electronic commerce and digital libraries: towards a digital agora 

Nabil Adam, Yelena Yesha


December 1996 **ACM Computing Surveys (CSUR)**, Volume 28 Issue 4

Full text available:  pdf(244.34 KB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

12 HyperNews: a MEDIA application for the commercialization of an electronic newspaper 

Jean-Henry Morin, Dimitri Konstantas

February 1998 **Proceedings of the 1998 ACM symposium on Applied Computing**

Full text available:  pdf(2.74 MB) Additional Information: [full citation](#), [references](#), [index terms](#)

**Keywords:** agents, copyright protection, electronic publishing

13 Open problems in electronic commerce 

J. D. Tygar

May 1999 **Proceedings of the eighteenth ACM SIGMOD-SIGACT-SIGART symposium on Principles of database systems**

Full text available:  pdf(99.77 KB) Additional Information: [full citation](#), [citations](#), [index terms](#)

14 A secure distributed capability based system (extended abstract) 

Howard L. Johnson, John F. Koegel, Rhonda M. Koegel


October 1985 **Proceedings of the 1985 ACM annual conference on The range of computing : mid-80's perspective: mid-80's perspective**

Full text available:  pdf(1.22 MB) Additional Information: [full citation](#), [references](#), [index terms](#)

**Keywords:** capability architecture, computer security, distributed system security, network encryption

**15 Copy detection mechanisms for digital documents**

Sergey Brin, James Davis, Héctor García-Molina

May 1995 **ACM SIGMOD Record , Proceedings of the 1995 ACM SIGMOD international conference on Management of data**, Volume 24 Issue 2Full text available:  [pdf\(1.51 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In a digital library system, documents are available in digital form and therefore are more easily copied and their copyrights are more easily violated. This is a very serious problem, as it discourages owners of valuable information from sharing it with authorized users. There are two main philosophies for addressing this problem: prevention and detection. The former actually makes unauthorized use of documents difficult or impossible while the latter makes it easier to discover such activity. I ...

**16 Bibliographic implication of computer documentation**


Diana Patterson

April 1983 **Proceedings of the 2nd annual international conference on Systems documentation**Full text available:  [pdf\(422.70 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Bibliography is the study of books: how they are made and their physical characteristics. Bibliographers have begun to make some important contributions to the history of ideas, especially with the advent of computerized library information systems. Computer manuals thus far have not been a subject of bibliographic interest and have not been considered worth preserving, even by their authors. Because of the variableness of computer manuals they present special problems to bibliographers, pr ...

**17 A compositional account of the Java virtual machine**


Phillip M. Yelland

January 1999 **Proceedings of the 26th ACM SIGPLAN-SIGACT symposium on Principles of programming languages**Full text available:  [pdf\(1.40 MB\)](#)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)


**Keywords:** Haskell, Java bytecode, Java virtual machine, verification

**18 Atomicity in electronic commerce**

J. D. Tygar

May 1996 **Proceedings of the fifteenth annual ACM symposium on Principles of distributed computing**Full text available:  [pdf\(1.74 MB\)](#)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**19 The Alpine file system**

M. R. Brown, K. N. Kolling, E. A. Taft

November 1985 **ACM Transactions on Computer Systems (TOCS)**, Volume 3 Issue 4Full text available:  [pdf\(2.95 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Alpine is a file system that supports atomic transactions and is designed to operate as a service on a computer network. Alpine's primary purpose is to store files that represent databases. An important secondary goal is to store ordinary files representing documents, program modules, and the like. Unlike other file servers described in the literature, Alpine

uses a log-based technique to implement atomic file update. Another unusual aspect of Alpine is that it performs all commu ...

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